

What is claimed is:

1. An information-recording medium comprising a substrate and a recording layer which is rewritable in accordance with phase-change caused by being irradiated with a laser beam, wherein the recording layer contains Bi, Ge, and Te, and composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te:

B3 (Bi<sub>3</sub>, Ge<sub>46</sub>, Te<sub>51</sub>);

C3 (Bi<sub>4</sub>, Ge<sub>46</sub>, Te<sub>50</sub>);

D3 (Bi<sub>5</sub>, Ge<sub>46</sub>, Te<sub>49</sub>);

D5 (Bi<sub>10</sub>, Ge<sub>42</sub>, Te<sub>48</sub>);

C5 (Bi<sub>10</sub>, Ge<sub>41</sub>, Te<sub>49</sub>);

B5 (Bi<sub>7</sub>, Ge<sub>41</sub>, Te<sub>52</sub>).

2. An information-recording medium comprising a substrate and a recording layer which is rewritable in accordance with phase-change caused by being irradiated with a laser beam, wherein the recording layer contains Bi, Ge, and Te, and composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te, and the recording layer has a film thickness of not more than 15 nm:

B2 (Bi<sub>2</sub>, Ge<sub>47</sub>, Te<sub>51</sub>);

C2 (Bi<sub>3</sub>, Ge<sub>47</sub>, Te<sub>50</sub>);  
 D2 (Bi<sub>4</sub>, Ge<sub>47</sub>, Te<sub>49</sub>);  
 D6 (Bi<sub>16</sub>, Ge<sub>37</sub>, Te<sub>47</sub>);  
 C8 (Bi<sub>30</sub>, Ge<sub>22</sub>, Te<sub>48</sub>);  
 B7 (Bi<sub>19</sub>, Ge<sub>26</sub>, Te<sub>55</sub>).

3. An information-recording medium provided as an optical disk comprising a recording layer which is rewritable in accordance with phase-change caused by being irradiated with a laser beam, wherein a relationship between a recording linear velocity V1 at a radius R1 and a recording linear velocity V2 at a position R2 disposed outside R1 satisfies  $V2/V1 \geq R2/R1$ , and the recording layer contains Bi, Ge, and Te, and composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te:

B2 (Bi<sub>2</sub>, Ge<sub>47</sub>, Te<sub>51</sub>);  
 C2 (Bi<sub>3</sub>, Ge<sub>47</sub>, Te<sub>50</sub>);  
 D2 (Bi<sub>4</sub>, Ge<sub>47</sub>, Te<sub>49</sub>);  
 D6 (Bi<sub>16</sub>, Ge<sub>37</sub>, Te<sub>47</sub>);  
 C8 (Bi<sub>30</sub>, Ge<sub>22</sub>, Te<sub>48</sub>);  
 B7 (Bi<sub>19</sub>, Ge<sub>26</sub>, Te<sub>55</sub>).

4. The information-recording medium according to claim 3, wherein  $R2/R1 \geq 1.5$  is satisfied.

5. The information-recording medium according to claim 3, wherein  $R2/R1 \geq 2.4$  is satisfied.

6. The information-recording medium according to claim 3, wherein  $8.14 \text{ m/s} \leq V1 \leq 8.61 \text{ m/s}$  is satisfied.

7. An information-recording medium comprising a recording layer which is rewritable multiple times and which is formed on a substrate having a recording track formed thereon, for recording information by causing phase-change in the recording layer under a recording condition in which a track pitch TP is smaller than  $0.6 \times (\lambda/NA)$  by scanning the recording track having the track pitch of TP across a laser beam having a wavelength  $\lambda$  collected by an objective lens having a numerical aperture of NA, wherein the recording layer contains Bi, Ge, and Te, and composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te:

B2 ( $\text{Bi}_2, \text{Ge}_{47}, \text{Te}_{51}$ );

C2 ( $\text{Bi}_3, \text{Ge}_{47}, \text{Te}_{50}$ );

D2 ( $\text{Bi}_4, \text{Ge}_{47}, \text{Te}_{49}$ );

D6 ( $\text{Bi}_{16}, \text{Ge}_{37}, \text{Te}_{47}$ );

C8 ( $\text{Bi}_{30}, \text{Ge}_{22}, \text{Te}_{48}$ );

B7 ( $\text{Bi}_{19}, \text{Ge}_{26}, \text{Te}_{55}$ ).

8. An information-recording medium comprising a

substrate and a recording layer which is rewritable in accordance with phase-change caused by being irradiated with a laser beam, wherein the information-recording medium has a disk-shaped configuration, a groove is previously formed in a concentric form or in a spiral form on the substrate, at least one of the groove and a land between the grooves is used as a recording track, at least one of the groove and the land is wobbled, and the recording layer contains Bi, Ge, and Te, and composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te:

- B2 ( $\text{Bi}_2$ ,  $\text{Ge}_{47}$ ,  $\text{Te}_{51}$ );
- C2 ( $\text{Bi}_3$ ,  $\text{Ge}_{47}$ ,  $\text{Te}_{50}$ );
- D2 ( $\text{Bi}_4$ ,  $\text{Ge}_{47}$ ,  $\text{Te}_{49}$ );
- D6 ( $\text{Bi}_{16}$ ,  $\text{Ge}_{37}$ ,  $\text{Te}_{47}$ );
- C8 ( $\text{Bi}_{30}$ ,  $\text{Ge}_{22}$ ,  $\text{Te}_{48}$ );
- B7 ( $\text{Bi}_{19}$ ,  $\text{Ge}_{26}$ ,  $\text{Te}_{55}$ ).

9. A target for an information-recording material having a composition containing Bi, Ge, and Te, wherein composition ratios thereof are within a range surrounded by the following respective points on a triangular composition diagram having apexes corresponding to Bi, Ge, and Te:

- B3 ( $\text{Bi}_3$ ,  $\text{Ge}_{46}$ ,  $\text{Te}_{51}$ );
- C3 ( $\text{Bi}_4$ ,  $\text{Ge}_{46}$ ,  $\text{Te}_{50}$ );
- D3 ( $\text{Bi}_5$ ,  $\text{Ge}_{46}$ ,  $\text{Te}_{49}$ );

D5 (Bi<sub>10</sub>, Ge<sub>42</sub>, Te<sub>48</sub>);

C5 (Bi<sub>10</sub>, Ge<sub>41</sub>, Te<sub>49</sub>);

B5 (Bi<sub>7</sub>, Ge<sub>41</sub>, Te<sub>52</sub>).